

Application No. 10/824,114
Amendment dated March 27, 2006
Reply to Office Action of October 27, 2005

Amendments to the Claims

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

1. (Currently Amended) A testing apparatus for repetitively simulating forces generated by different pyrotechnic devices on a seat belt system, the testing apparatus comprising:

a pretensioner portion coupled to the seat belt system;

actuating fluid for being supplied to the pretensioner portion; and

a control portion that stores the actuating fluid at predetermined pressures selected to deliver the fluid to the pretensioner portion for simulating performance characteristics of pyrotechnic devices on the seat belt system[.].

a retractor of the seat belt system; and

an energy dissipation module distinct from the retractor and disposed between the retractor and the pretensioner portion to avoid impacts with the pretensioner portion during testing operations to allow for repeated use of the testing apparatus.

2. (Original) The testing apparatus of claim 1 wherein the control portion includes a housing containing the actuating fluid, and a fast-acting valve that controls fluid flow between the housing and the pretensioner portion.

3. (Original) The testing apparatus of claim 2 wherein the fast-acting valve shifts between open and closed positions in approximately seven to eight milliseconds.

4. (Original) The testing apparatus of claim 2 wherein the fast acting valve includes a regulator therefor with the regulator applying a pneumatic signal to the valve.

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5. (Original) The testing apparatus of claim 2 wherein the housing comprises an accumulator with the accumulator and the fast-acting valve being operable so that the pretensioner portion generates controlled jerk forces on the seat belt system, and the accumulator allows the actuating fluid to be contained under different predetermined pressures therein with the pressures selected to provide predetermined jerk forces to the seat belt system in the pretensioner portion.

6. (Original) The testing apparatus of claim 5 wherein the accumulator and the fast-acting valve are operable so that the selected fluid pressure in the accumulator is a linear function of the jerk force applied to the seat belt system via the pretensioner portion.

7. (Original) The testing apparatus of claim 1 wherein the actuating fluid is compressed air.

8. (Cancelled)

9. (Currently Amended) A testing apparatus for simulating forces generated by pyrotechnic devices on a seat belt system, the testing apparatus comprising:

a pretensioner portion coupled to the seat belt system;

actuating fluid for being supplied to the pretensioner portion;

a control portion that stores the actuating fluid at predetermined pressures selected to deliver the fluid to the pretensioner portion for simulating performance characteristics of pyrotechnic devices on the seat belt system;

an energy dissipation module between the seat belt system and the pretension portion to prevent impacts against the pretensioner portion during testing operations. The testing apparatus of claim 8 wherein the seat belt system includes a coupling member and the pretensioner portion includes a piston rod attached to the coupling member and extending through the energy dissipation module.

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10-26. (Cancelled)